Challenges To Rehabilitating Fire-Adapted Ecosystems In The United States

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Fire regulates many processes necessary to maintain healthy ecosystems. We humans have learned to manipulate many of these processes to our benefit. Until well into the past century, fire was the only practical way to accomplish most natural resource objectives. As long as we accepted the inevitability of fire on nature's terms, the precarious balance between humans and this natural force was maintained. But this union was based on necessity, so when many of the tasks formally accomplished by fire could be done with machines, the intentional use of fire was usually considered archaic and banned.

Most ecosystems exhibit wide amplitude within which they are markedly resilient, but they do have limits. In the U.S. we have been slow to recognize this fact. Attempted fire exclusion has produced long fire-free periods punctuated with occasional catastrophic fire, resulting in declining ecosystem health, which threatens the very existence of a large number of endemic plants and animals. According to a recent news release, sixty percent of America's national forests are in an unhealthy condition while one out of every three acres of national forest is dead or dying. The resulting pyrotechnics are spectacular from a distance, terrifying as one gets closer, and potentially fatal whenever humans are directly involved. After the Yellowstone fires of 1989, the public demanded changes; fire policy was modified to return fire to the woods, while at the same time directing agencies to eliminate fires likely to endanger human health and safety, or to result in severe ecosystem damage.

Modification of fire policy alone, however, could not change the reality of the situation on the ground. We do not have the ability to stop catastrophic fires once started, but we can reduce the fuels that foster them. Managers are currently trying to translate this federal fire policy into operational guidelines. We can't just start up where we left off using fire because long periods without fire have resulted in dangerous fuel conditions. Initial burns are risky, albeit not as risky as continued fire exclusion. Spatial changes in topography and fuels, coupled with temporal changes in fuel moisture and weather make the successful application of fire as much art as science. When unpredicted weather occurs, fire effects often fall outside the intended range. Although the risk of a bad outcome decreases with multiple burns, it never disappears and the law of averages is always at work. There are currently few incentives for doing the right thing, but many disincentives. If

we are to succeed in this endeavor, we must seize this window of opportunity to support the people directly involved as well as work with the general public. The public has difficulty differentiating between Rx fire and wildfire. People from urban backgrounds are often not aware of the benefits of fire; they regard blackened landscapes as damaged, rather than as rejuvenated. And even the people that understand the necessity of fire, often support its use only when it is not likely to inconvenience them.

The state of Florida has assumed a leadership role in making sure fire managers have public support and that it is deserved. A basic requirement is to have a secure legal footing. Landmark statutes promote the use of Rx fire, give burn managers legal protection if they follow certain procedures, provide for burner certification, and allow the Division of Forestry to burn hazardous fuel accumulations on private land. Many counties have passed ordinances affirming a landowners right to use fire and some have passed ordinances that establish smoke corridors. The state observes an official Prescribed Fire Awareness Week each year. A Media Day is also held annually where legislators; and television, radio, and newspaper reporters are invited to participate in demonstration burns and see new tools and equipment.

Another crucial factor is to make sure fire managers are highly trained and exude professionalism. Florida has its own wildland fire training facility. Numerous courses have been developed, and others messaged to reflect Florida conditions. The Division of Forestry makes sure its employees have well-maintained state-of-the-art equipment and personal protective gear. Actual and forecast burning conditions are given to everyone seeking a burn authorization. They have their own fire meteorologist who, upon request, will provide a spot weather forecast. Division personnel help plan and conduct burns for private landowners upon request. Fire councils help keep Rx burners up to date on research results, emerging technology, training opportunities and other fire related issues around the state and beyond. Their web pages can be accessed through the Florida Division of Forestry web page (http://flame.fl-dof.com/).

If we want the public to continue to allow fire managers to use fire, fire managers must consistently demonstrate that they are highly skilled and well trained professionals. When the occasional temporary inconveniences and rare bad outcomes occur, we want to make sure the public understands that these are much preferable to the degenerating congested, diseased, insect-infested firetraps that result from fire exclusion. To help in this endeavor, Florida has made a concerted effort to increase the knowledge of future voters regarding the role of wildland fire by developing a fire curriculum for grade schools. We want everyone to recognize that the judicious use of Rx fire is indeed THE ecological imperative in fire-adapted ecosystems.